ABSTRACT OF THE DISCLOSURE

Systems, apparatuses, and methods for driving an optical source with a current source. The optical source driver has a primary control loop having a DC-DC converter and an operational amplifier, wherein the DC-DC converter has a power input, a power output connected to the input of the optical source, and a control input, and wherein the operational amplifier has a first input connected between the optical source and the current source, a second input, and an output connected to the control input of the DC-DC converter, for controlling the output of the DC-DC converter in response to a control signal at the second input. In addition, the optical source drive includes an override control loop having a power input, a power output connected to an input of the optical source, a switch between the power input and the power output, and a comparator having a first input connected between the optical source and the current source, having a second input, and having an output connected to a control input of the switch, for selectively connecting the power input to the power output when a signal between the optical source and the current source falls below a predetermined point.